

Deploying Geographic Information System (GIS) and Remote Sensing (RS) in heritage conservation, theory, and practice

Chairs:

Reza SHARIFI, ¹Brandenburg University of Technology, Cottbus-Senftenberg, Germany

Alireza IBRAHIMI, Avicenna University, Kabul, Afghanistan

Marco Block-Berlitz, HTW Dresden, Germany

Keywords: *Geographic Information System (GIS)—heritage conservation—decision making*

Heritage conservation and archaeology are interdisciplinary subjects; in these fields utilising the spatial data from historic sites and objects are playing a pivotal role. For heritage managers the Geodata is an essential source of information, which leads to better decision making. In this field, various techniques and methods related to Geographic Information System (GIS) and Remote Sensing are advancing in a swift-paced. Therefore the heritage practitioners need to handle with this new technology.

Theoretically, we can divide GIS implication in the field of conservation into different phases: a) Gathering data b) Data Input and Verification c) Data Storage and Database Management d) Data output and presentation and e) Data transformation, analysis and modelling. In all these fields heritage conservation can benefit, in terms of cost-benefit and task quality. GIS in the field of heritage needs to cope with other new and advanced topic such as Cloud computing, artificial intelligence and so on.

Among all the issues, in our session, we invited researchers to contribute to the frame of the below areas:

- Using GIS to integrate the spatial data, produced by the survey, historical maps, etc., from different sources attributed to the cultural heritage;
- Utilising remote sensing methods such as Satellite Imagery and Arial photography in heritage analysis, and monitoring;
- New GIS methods in heritage documentation for sharing, publishing and storing;
- Using internet-based GIS platform and techniques such as Spatial Data Infrastructure (SDI), WebGIS, mobile GIS;
- Role of GIS in decision making, especially on sensitive cases like destruction during excavation or damages due to illegal actions or conflict.